

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (original) Peptido-nucleic acid (PNA) comprising 12 to 24 nucleotide bases, said peptido-nucleic acid being complementary to the sense or antisense filament of human N-myc gene.
2. (original) The peptido-nucleic acid (PNA) according to claim 1, in which antisense PNA (5'-TCCACCCAGCGCGTCC-3') is an only sequence complementary to 5'-UTR region of human N-myc gene.
3. (original) The peptido-nucleic acid (PNA) according to claim 1, in which PNA is conjugated with a carrier that can get through the nuclear membrane of target cells expressing N-myc gene.
4. (original) The conjugated peptido-nucleic acid (PNA) according to claim 3, in which said carrier is conjugated in 3' position to PNA sequence.
5. (currently amended) The peptido-nucleic acid (PNA) according to claim[[s]] 3 and 4, in which said carrier is chosen among the following peptide sequences:
 - PKKKRKV;
 - RQIKIWFQNRRMKWKK;
 - GWTLNSAGYLLGKINLAALAKKIL;
 - (D)-KKWKMRRNQFWVKVQR;
 - GRKKRRQRRRPPQ;
 - YGRKKRRQRRR;
 - MSVLTPLLLRGLTGSARRLPVPRAKIHSL;
 - KFFKFFKFFK;
 - KKKK.
6. (currently amended) The peptido-nucleic acid (PNA) according to claim[[s]] 3 to 5, in which conjugated PNA is a sense antigen PNA or an antisense antigen PNA.

7. (original) The peptido-nucleic acid (PNA) according to claim 6, in which sense antigen PNA or antisense antigen PNA (5'-ATGCCGGGCATGATCT-3'; antisense antigen: 5'-AGATCATGCCCCGGCAT-3') are complementary to a exon 2 sequence of N-myc gene.
8. (original) The peptido-nucleic acid (PNA) according to claim 3, in which sense antigen PNA or antisense antigen PNA are conjugated in 3' with a nuclear localization signal (NLS) deriving from SV40 virus (peptide sequence PKKKRKV).
9. (currently amended) A pharmaceutical composition comprising a peptido-nucleic acid PNA according to ~~at least one of the claims 1 to 8.~~ claim 1.
10. (currently amended) Use of a peptido-nucleic acid PNA according to ~~at least one of the claims 1 to 8~~ claim 1 for preparing a pharmaceutical composition for treating genetic diseases.
11. (original) Use of a peptido-nucleic acid PNA according to claim 10 for preparing a pharmaceutical composition for treating tumors associated to the expression of N-MYC protein.
12. (currently amended) Use of a peptido-nucleic acid PNA according to claim 10 ~~or~~ ~~11~~ for preparing a pharmaceutical composition for treating tumors such as neuroblastoma, retinoblastoma, medulloblastoma, glioblastoma, astrocytoma or lung small cell tumor, rhabdomyosarcoma, B-type lymphoblastic acute leukemias.
13. (new) The peptido-nucleic acid (PNA) according to claim 4, in which said carrier is chosen among the following peptide sequences:
- PKKKRKV;
 - RQIKIWFQNRRMKWKK;
 - GWTLNSAGYLLGKINLAALAKKIL;
 - (D)-KKWKMRRNQFWVKVQR;
 - GRKKRRQRRRPPQ;
 - YGRKKRRQRRR;
 - MSVLTPLLLRGLTGSARRLPVPRAKIHSL;
 - KFFKFFKFFK;
 - KKKK.

14. (new) The peptido-nucleic acid (PNA) according to claim 4, in which conjugated PNA is a sense antigen PNA or an antisense antigen PNA.

15. (new) The peptido-nucleic acid (PNA) according to claim 5, in which conjugated PNA is a sense antigen PNA or an antisense antigen PNA.

16. (new) The peptido-nucleic acid (PNA) according to claim 14, in which sense antigen PNA or antisense antigen PNA (5'-ATGCCGGGCATGATCT-3'; antisense antigen: 5'-AGATCATGCCCCGGCAT-3') are complementary to a exon 2 sequence of N-myc gene.

17. (new) The peptido-nucleic acid (PNA) according to claim 15, in which sense antigen PNA or antisense antigen PNA (5'-ATGCCGGGCATGATCT-3'; antisense antigen: 5'-AGATCATGCCCCGGCAT-3') are complementary to a exon 2 sequence of N-myc gene.